

Warlpiri people are warned that this talk contains pictures and names of persons who have passed away.

A corpus-based study of flexible word order, language contact and language change in Warlpiri



I gratefully acknowledge the Warlpiri people who provided the material used in this presentation. I acknowledge that the Warlpiri data was recorded on Warlpiri and Gurindji land and I pay my respects to their elders past and present.



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Starting point

Flexible word order common in Australian languages, but:

1. Governing principles not understood in all detail and
2. Effects of contact with English unclear

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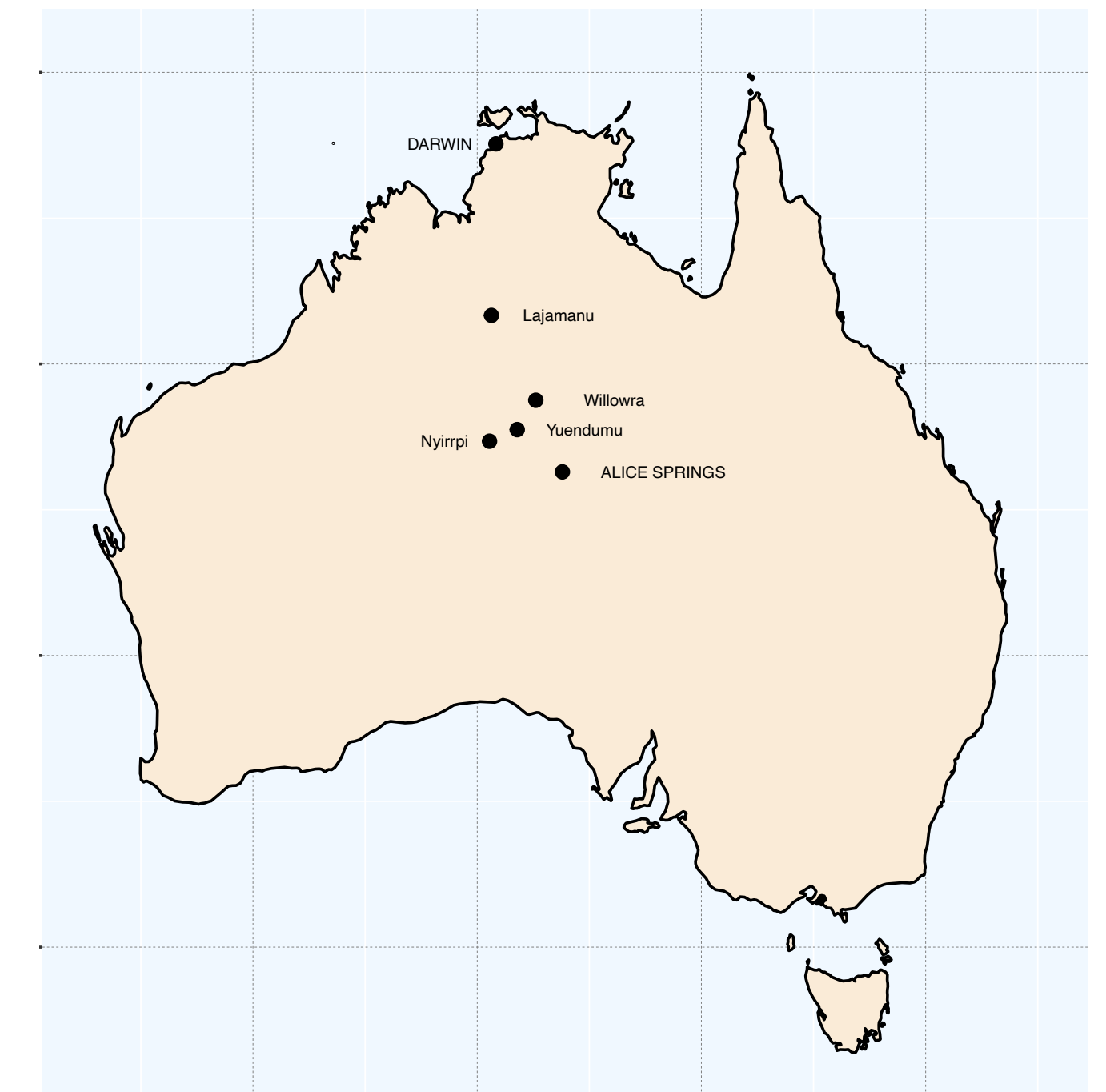
Under-documentation, no long written tradition, and conflicting evidence

(e.g. Langlois 2004, Wilmoth et al. 2022 for Pitjantjatjara)

The solution: Warlpiri!

- One of the best-documented Australian languages
(e.g. Hale 1983; Nash 1980; Simpson 1983; Swartz 1991; O'Shannessy 2006)
- First documentation with (available) audio recordings in the 1960s
(Hale 1966-1967a, b)
- Previous studies point to language change, but no recent studies across all communities (Bavin & Shopen 1985, O'Shannessy 2006)

The four Warlpiri communities



Corpus-based analysis of spoken narratives:

1. Has word order changed in the last decades?
= Towards a more stable word order and SVO
2. What variables influence word order and have they changed?

Background

Warlpiri & Flexible word order



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Warlpiri

- Spoken by about 2,592 speakers (2021 ABS Census) in Central Australia
- Four major communities: Lajamanu, Willowra, Nyirrpi, Yuendumu

The four Warlpiri communities



Warlpiri

- Increasing contact with English from 1880s, particularly from 1940s
- Multilingual: Warlpiri, Light Warlpiri, Kriol, Aboriginal Australian English, Standard Australian English, neighboring languages

The four Warlpiri communities



Flexible word order

Famously flexible word order: **VS** or **SV**

- (1) *jarnku* *=pala* *ya-nu* *yapa* *jirrama*
separately AUX.3DL.SBJ go-PST person two

‘Two people went separately.’ (2.19-056; Hale 1966-1967a)

- (2) *ngarrkangkarla* *=lpa* *=lu* *ya-nu*
big.group.of.people AUX.PST.IMPF AUX.3PL.SBJ go-PST

‘The big group of people went.’ (2.19-113; Hale 1966-1967a)

Flexible word order

Famously flexible word order: VO or OV

- (3) *yinya* *ka* *=lu* *karnta-ngku* *karla* *miyi-pardu* *yarla*
this AUX.PRS =AUX.3PL.SBJ woman-ERG dig.NPST vegetable-little yam

‘Over there, the women are digging up the yams.’ (2.19-066-7; Hale 1966-67a)

- (4) *kapi* *miyi* *yarla* *warru* *karla*
AUX.FUT vegetable yam around dig.NPST

‘(We) will dig up yams all around.’ (2.19-014; Hale 1966-1967a)

Evidence for influence from information structure

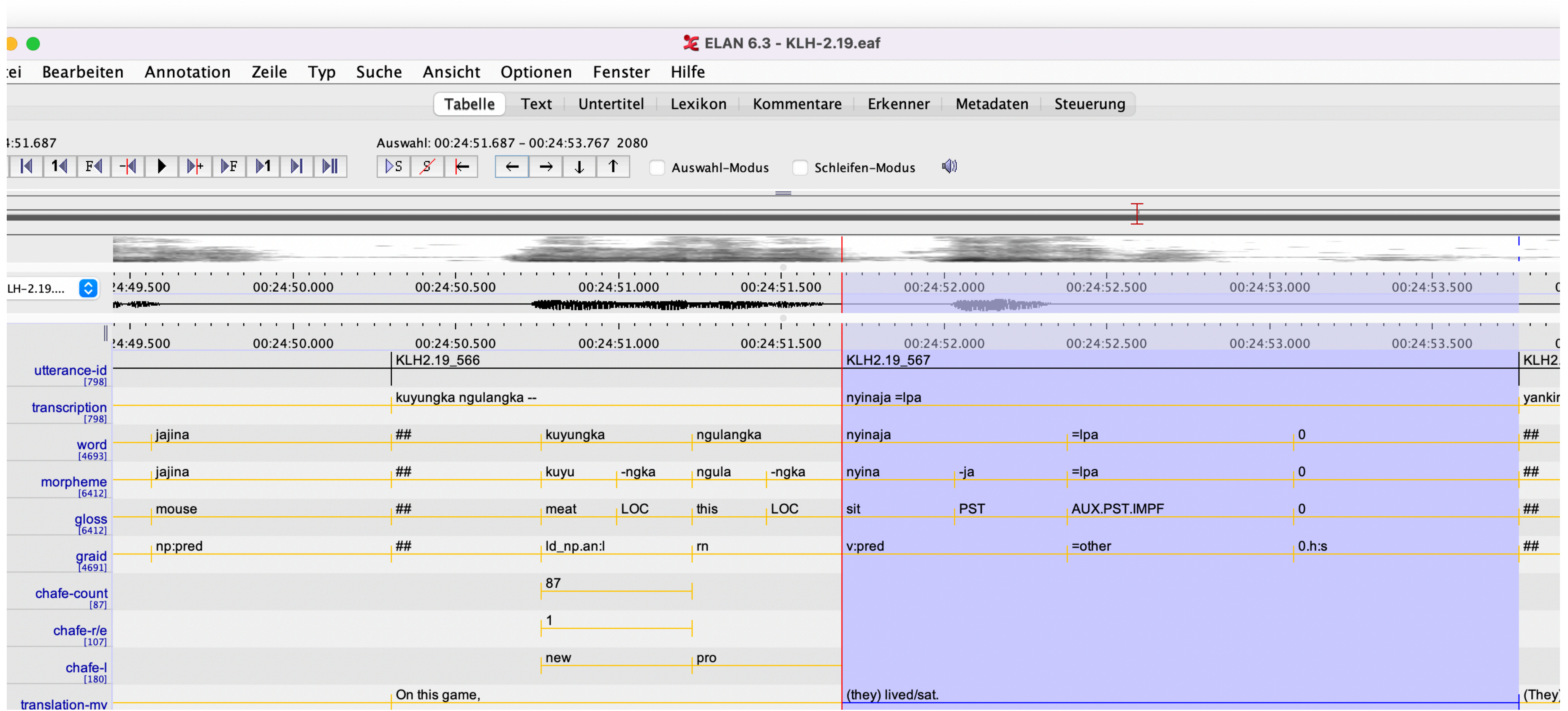
(O'Shannessy 2006, 2016; Swartz 1991; Hale et al. 1995; Hale 1992, Simpson 2006)

But: “[w]e are a long way from a full understanding of information structure possibilities in Warlpiri, and much of what I have written here is tentative and requires serious investigation of the Warlpiri corpus” (Simpson 2006: 512)

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Corpus



Many thanks to the speakers and researchers sharing their language and their data with me!

- Datasets: from 1960s and 2000s
- 1852 clauses
- Genre: spoken narratives
- No fieldwork possible due to COVID-19, use of existing data: Daniels 2009; Hale 1966-1967a, b; Morton 2009a-e; Nelson 2009; O’Shannessy 2004a-e, 2022; Presley 2009; Ross 2009

	1960s	2000s
Number of clauses	835	1017
Speaker age	66, 20s	40, 50s, 63, 64, 65, 71
Genre	Spoken narratives	Spoken narratives
Communities	Willowra	Willowra, Lajamanu, Yuendumu

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Older recordings:

- Plant descriptions
- Traditional stories/old way of life

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Newer recordings:

- Picturebook stories
- Traditional stories

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- Segmented into intonation units
- Translated, glossed
- Annotated with GRAID (Haig & Schnell 2014), reference tracking (Schiborr et al. 2018), and other annotation schemes

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Variables included in the analysis:

- Referential givenness/newness
- Animacy
- Lexicality
- Transitivity
- Antecedent distance
- Heaviness of nominal expression (how many words/morphemes)
- Speaker age
- ‘Topicality’ (such as frequency of referent per narrative/in last clauses)
- English loanwords
- Existence of case marking
- Word(s)-/speaker-/community-/genre-specific tendency for a word order
- Priming: word order of the previous clause
- “idea” tracking
- Contrastiveness

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Why referential givenness/newness?

- Suggested as a relevant and relatively straightforward variable in literature
(e.g. Swartz 1991; Simpson 2006)
- Preliminary statistical modeling suggests statistical significance for most datasets

Referential givenness/newness

Based on reference tracking in Multi-CAST (RefIND/ISNRef, Schiborr et al. 2018):

- New
- Bridging (inferable from e.g. context)
- Given
- Unused (e.g. the sun)

Referential givenness/newness

Based on reference tracking in Multi-CAST (RefIND/ISNRef, Schiborr et al. 2018):

- New
- Bridging (inferable from e.g. context)
- Given
- Unused (e.g. the sun), **excluded in this talk**

New

While playing around, (they) continue to eat, (they) go along killing (meat) still towards the camp. (063)
(The game) is still in an uncooked form, then. (064)
(They) carry the meat here again. (065)
Over there, (066) the women dig for bush potatoes. (067)

(5)	<i>kapi</i>	<i>ngurlu-pardu</i>	<i>ka</i>	<i>=lu</i>	<i>0</i>	<i>yurupa-rni</i>
	and	seeds-little	AUX.PRS	=AUX.3PL.SBJ	0	grind-NPST
		035			033	
		<i>new</i>				

‘(They) are grinding little seeds.’ (2.19-068; Hale 1966-67a)

Bridging

Inferable referent (e.g. frame semantics, context) (Schiborr et al. 2018: 15)

(6) ‘(It) bumped a **tree**, a big one.’ (wwa02-083-085; O’Shannessy 2022)

yarlpa

wanti-ja

modikayi-ki

branch

fall-PST

car-DAT

032

030

bridging

‘A branch fell over the car.’ (wwa02-086; O’Shannessy 2022)

Given

(7) *ngula-jangka =ju* *kuuku* *ya-ninja-ya-rnu*
this-after =JU monster go-INF-AM-PST
003
new

‘After this, a monster came along.’ (wa29-01-004; O’Shannessy 2004d)
[...]

kuuku-ngu *ka* *ma-ni* *jarntu*
monster-ERG AUX.PRS get-NPST dog
003 002

‘The monster gets the dog.’ (wa29-1-011; O’Shannessy 2004d)

Order of subject and verb

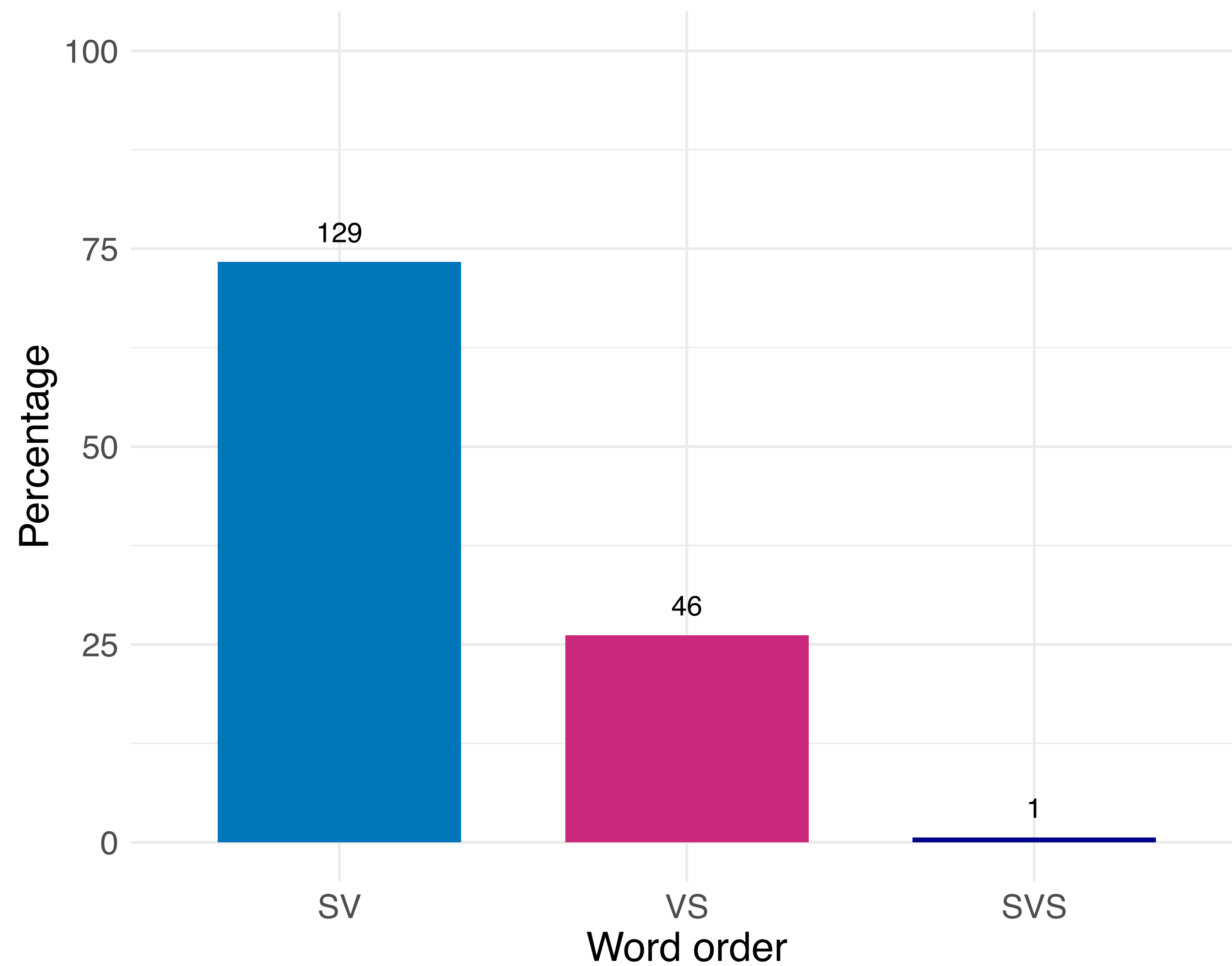


Picture of Warlpiri speaker Sam Japangardi, taken by David Nash.

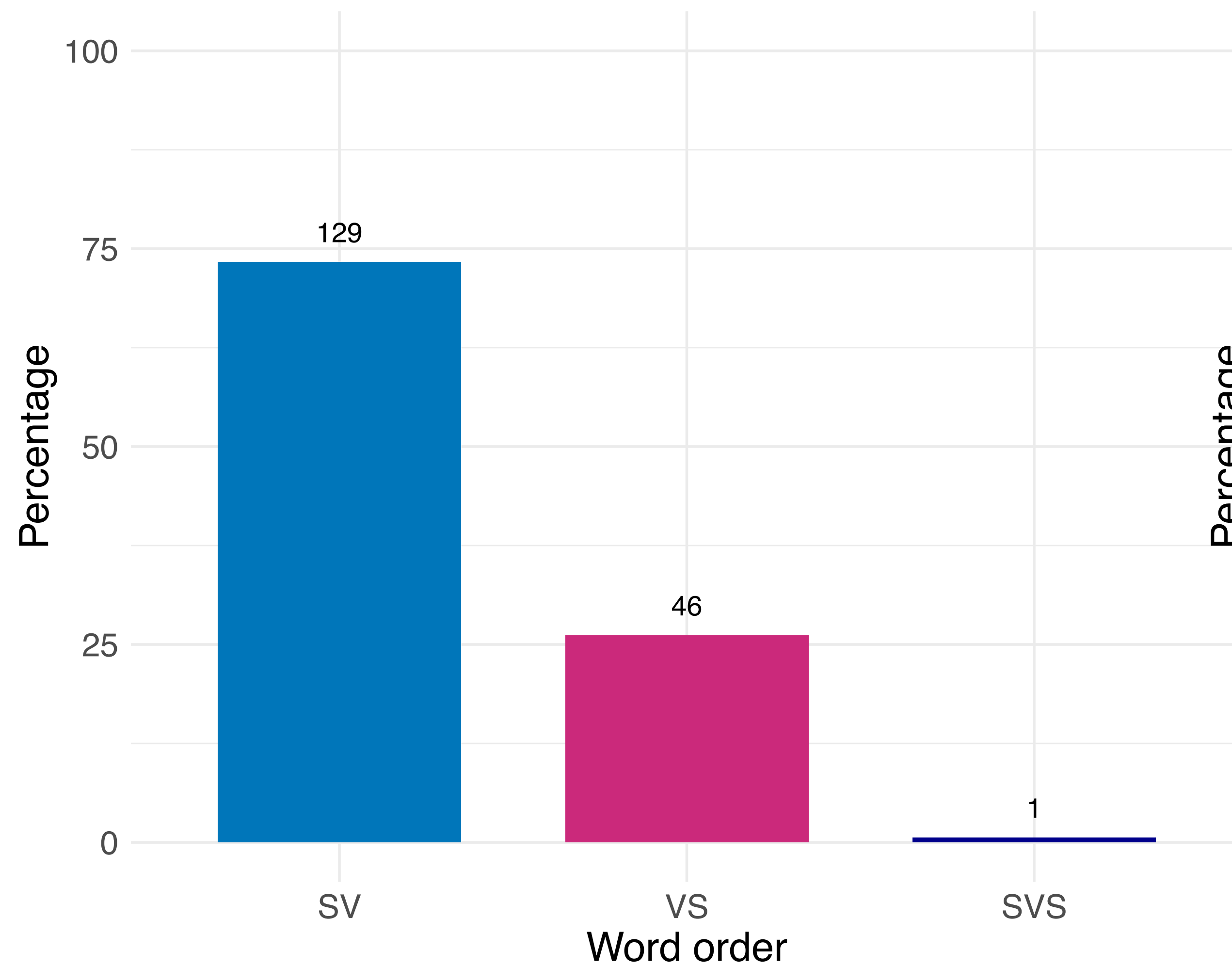
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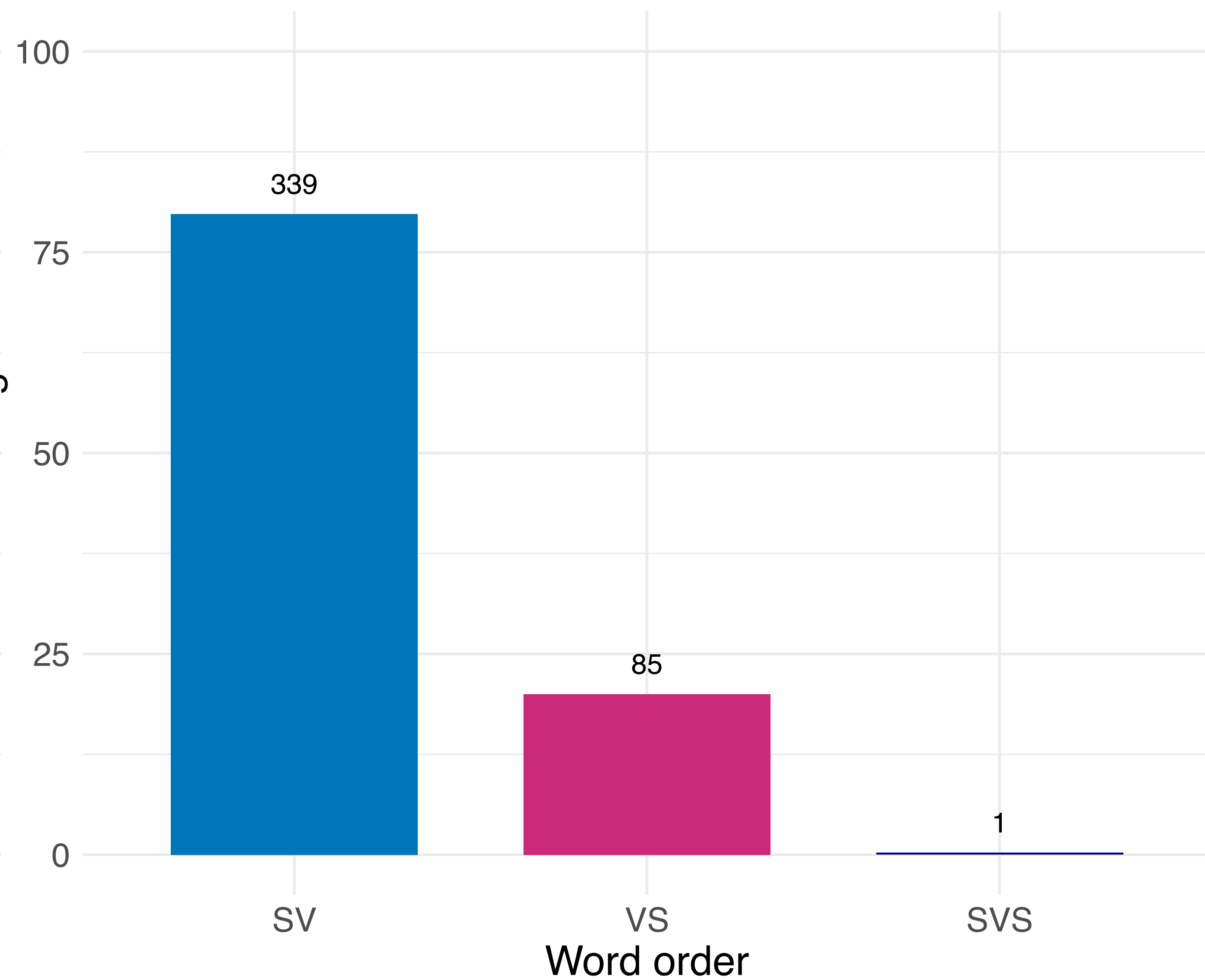
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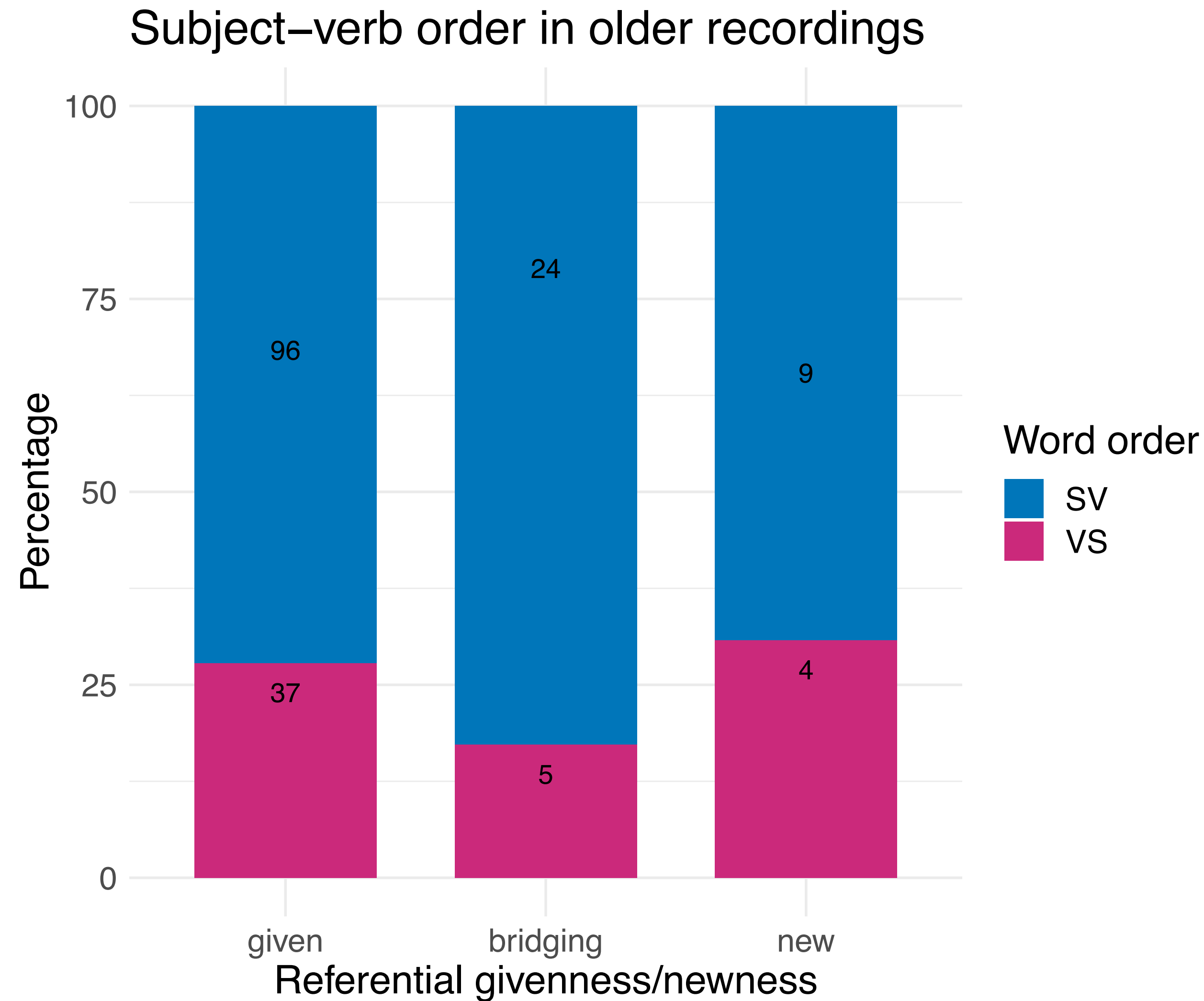
Subject–verb order in newer recordings



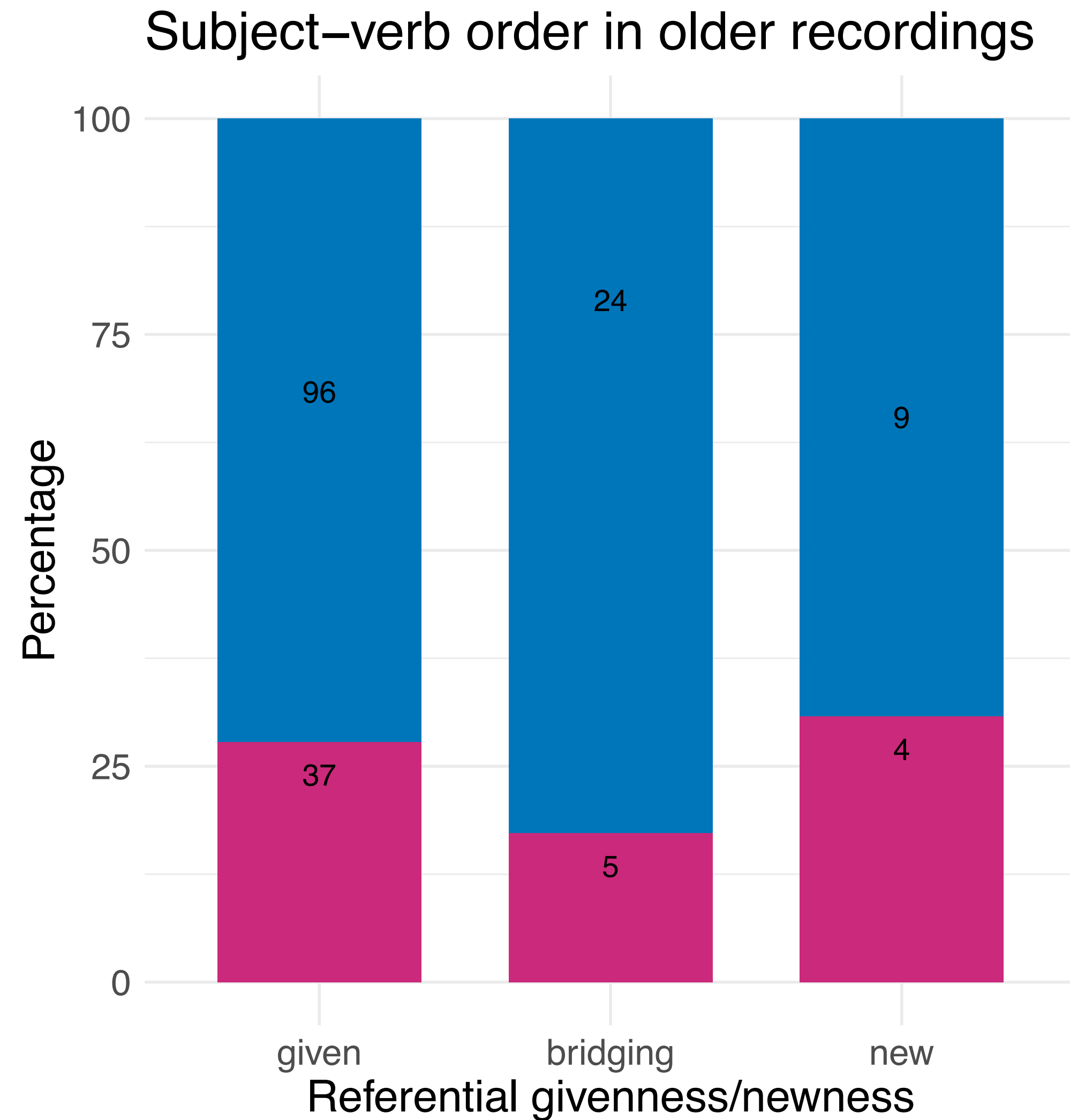
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In older recordings, bridging referents prefer SV more than given/new referents.



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Probably because of plant descriptions

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- Traditional stories/dreamings

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Plant descriptions

- Series of plant descriptions with frequent mentions of the same plants/habitats
- Reference “reset” for each description, but plants/habitat are always bridging (rather than new)
- Further increase in bridging frequency because of description of different plant parts

Plant descriptions

(8) *kararrpa*
Kararrpa
0033

bridging

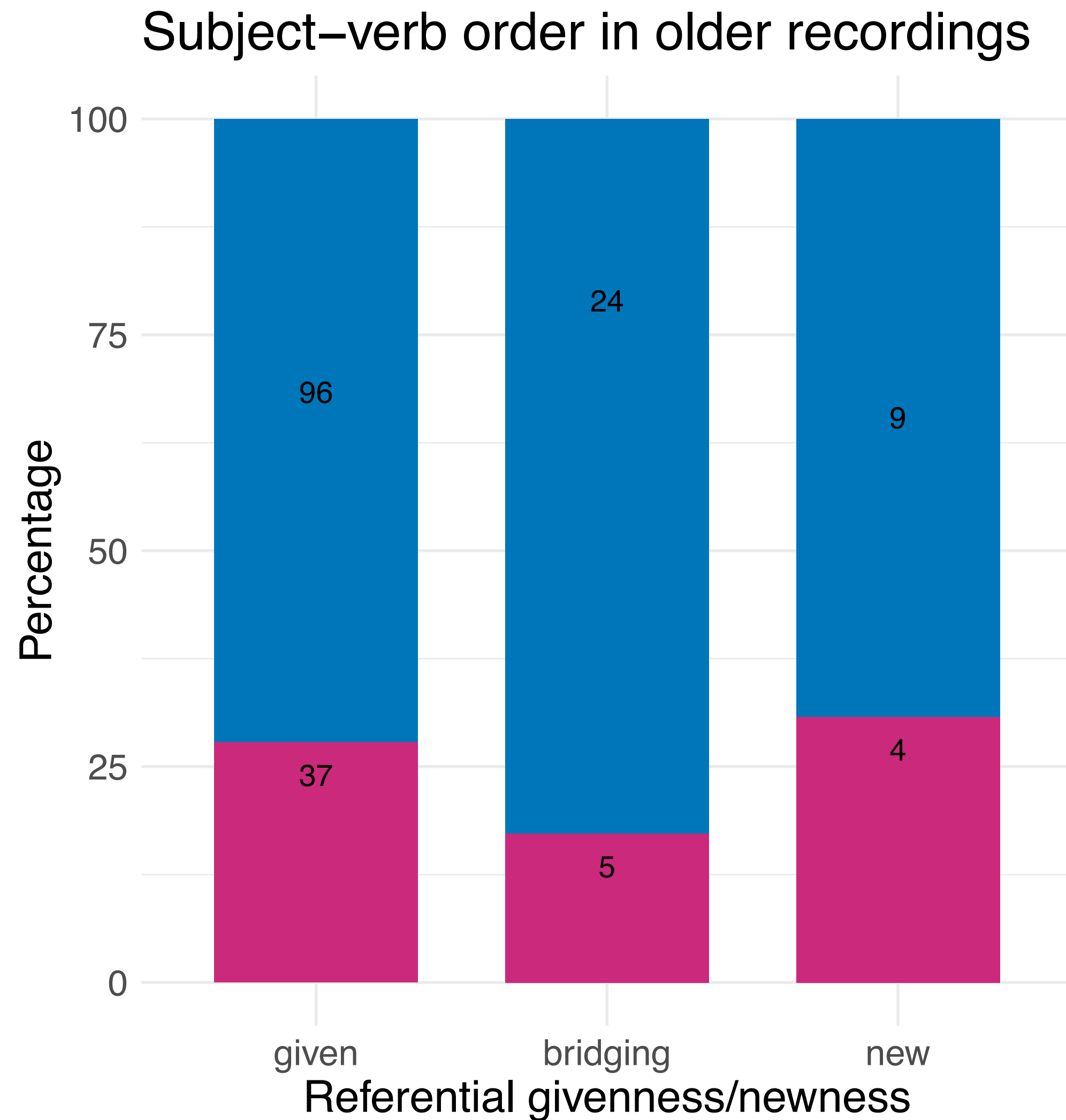
<i>kararrpa</i>	<i>ka</i>	<i>ngula</i>	<i>=ju</i>	<i>pardi</i>
Kararrpa	AUX.PRS	this	=JU	grow
0033				

manangka
spinifex.plains
0034

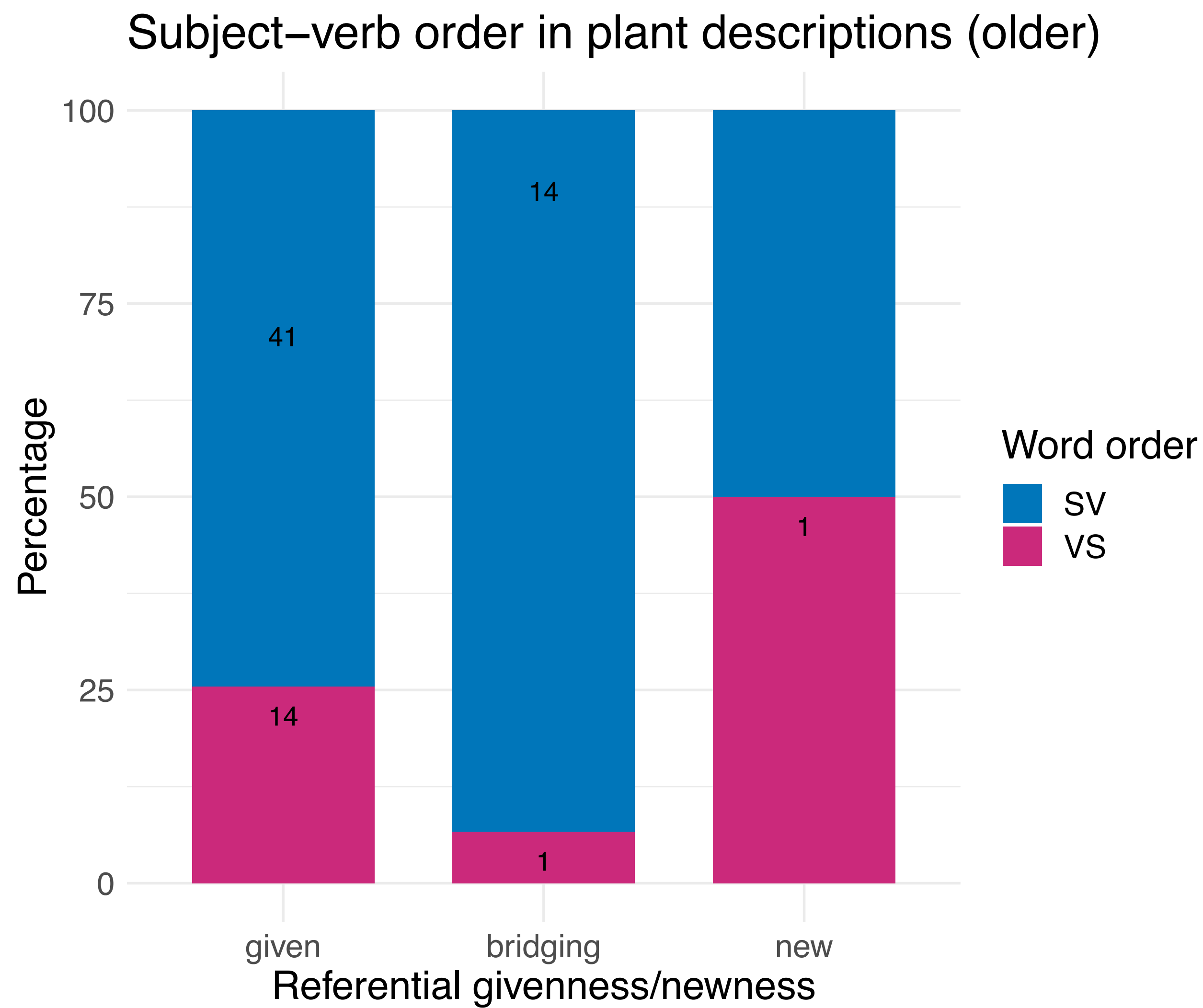
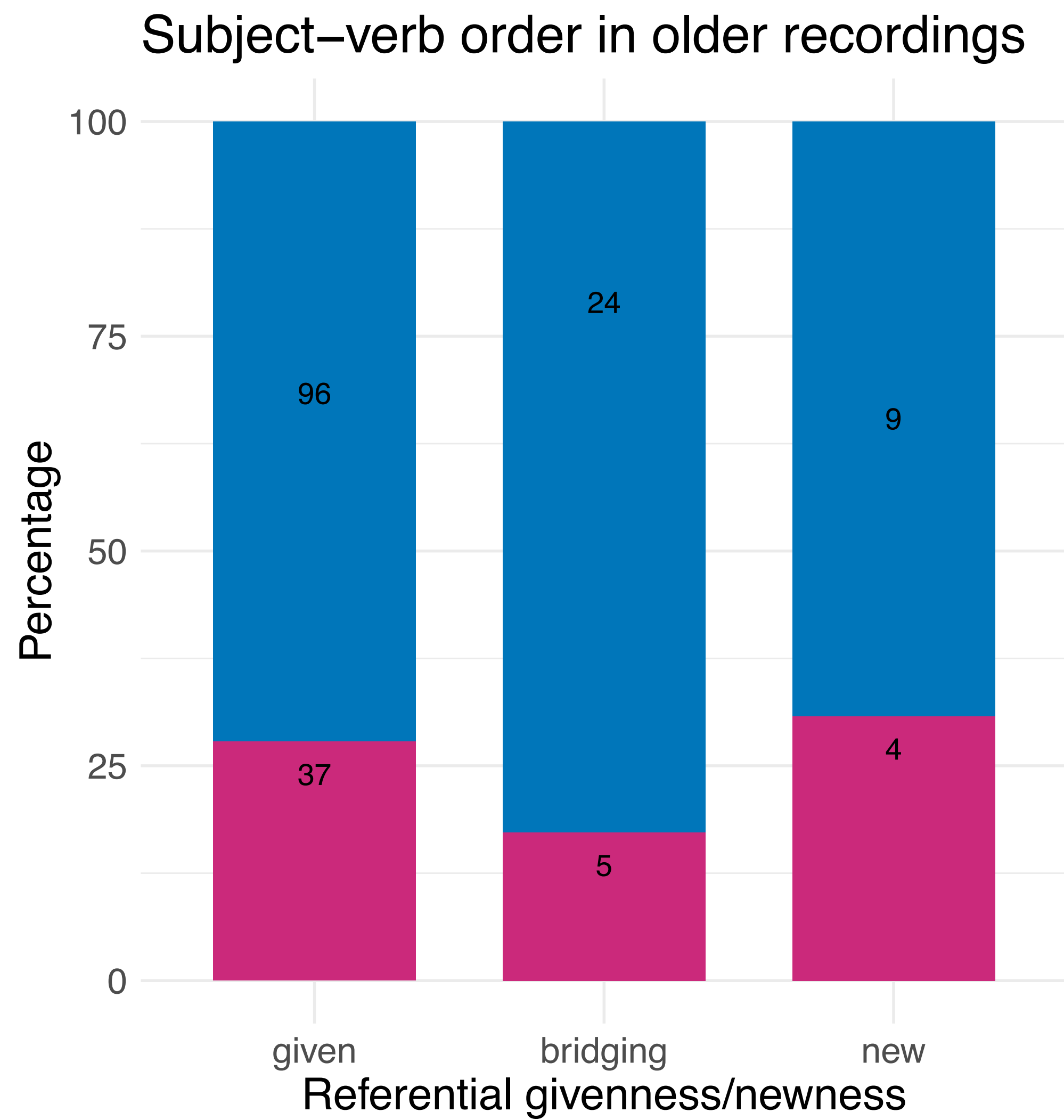
bridging

‘The Kararrpa — this Kararrpa grows on the spinifex plains.’ (K01-0074-0076; Hale 1966-1967a)

Bridging referents prefer pre-verbal position in plant descriptions:

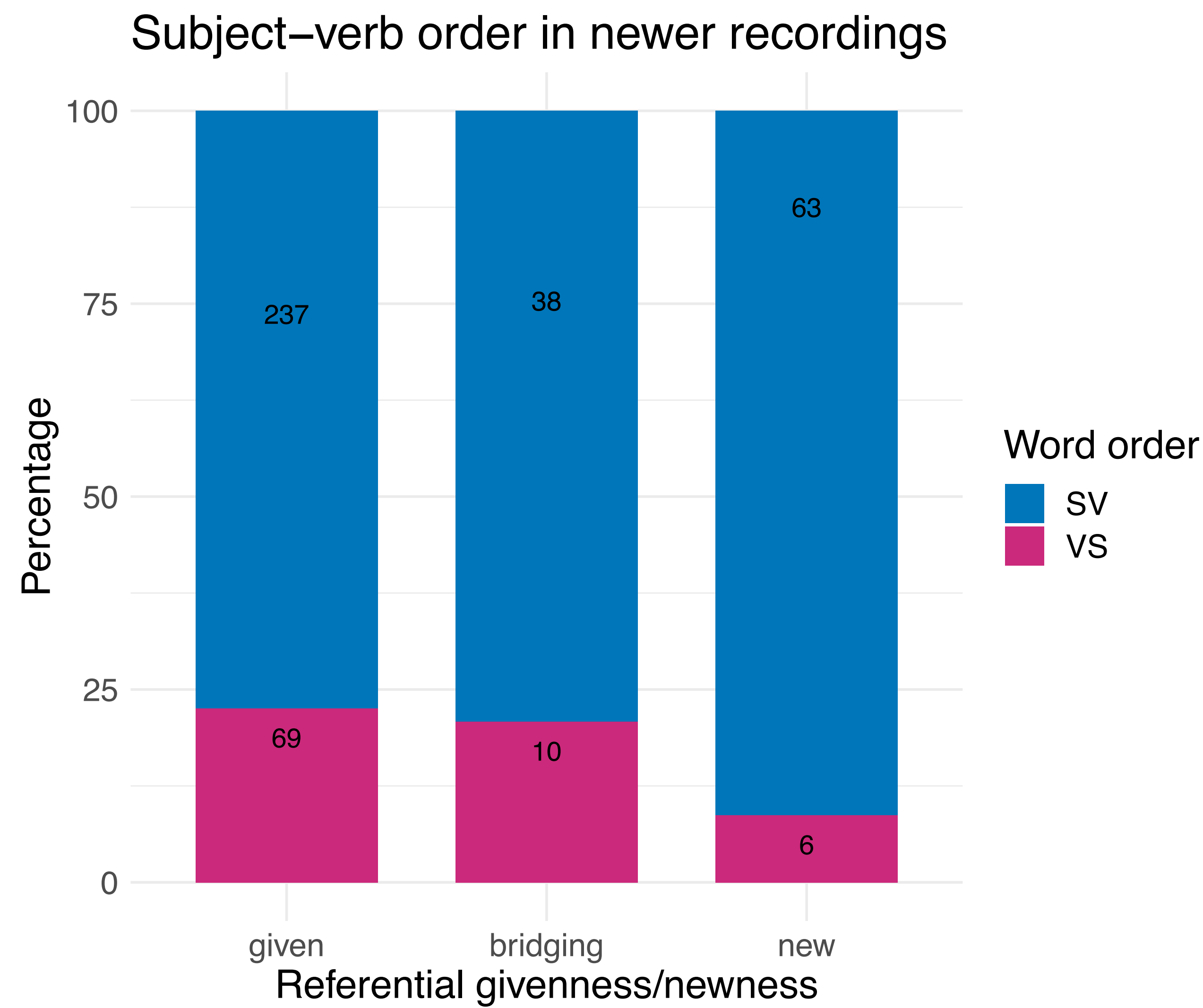


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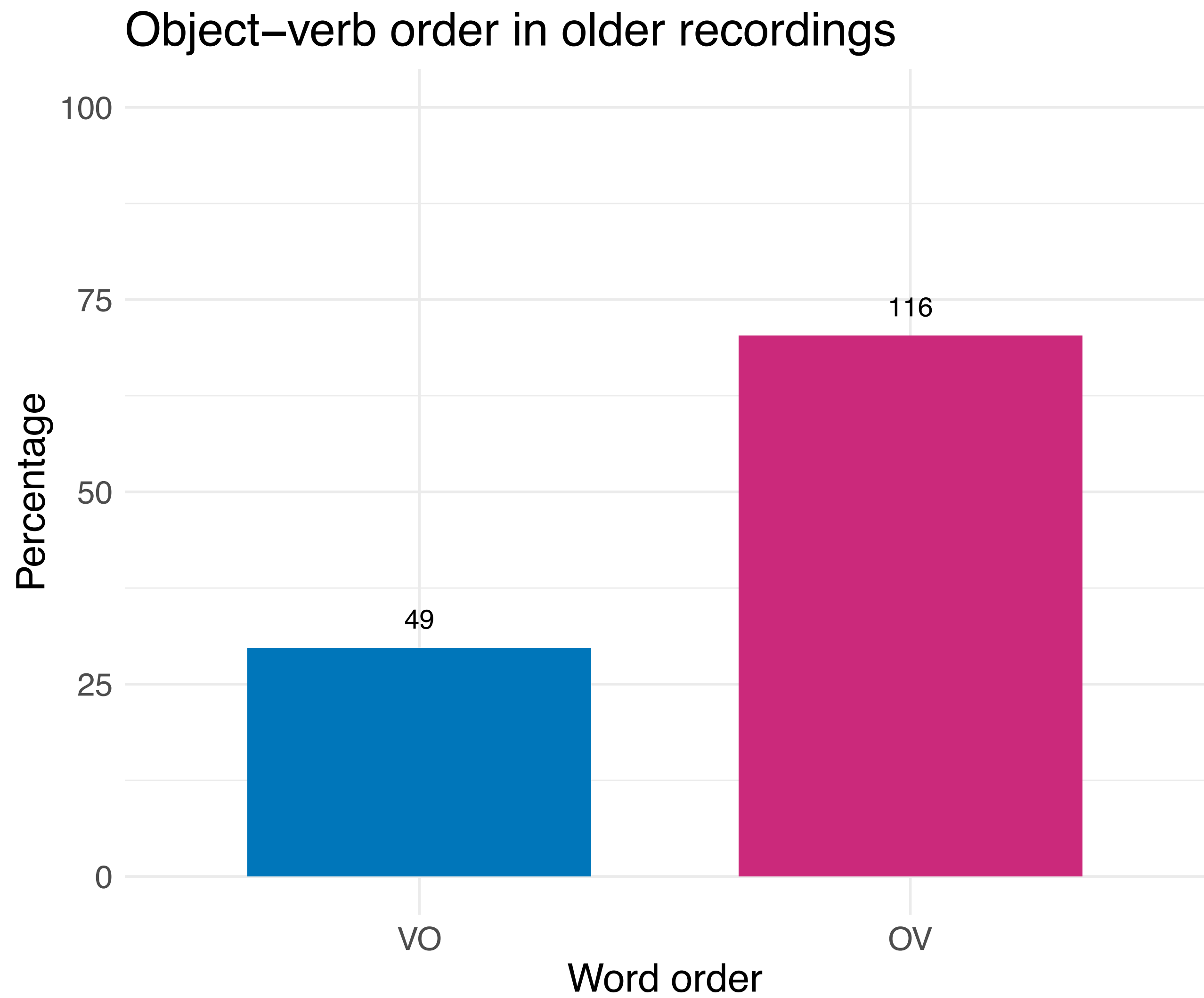
Order of object and verb

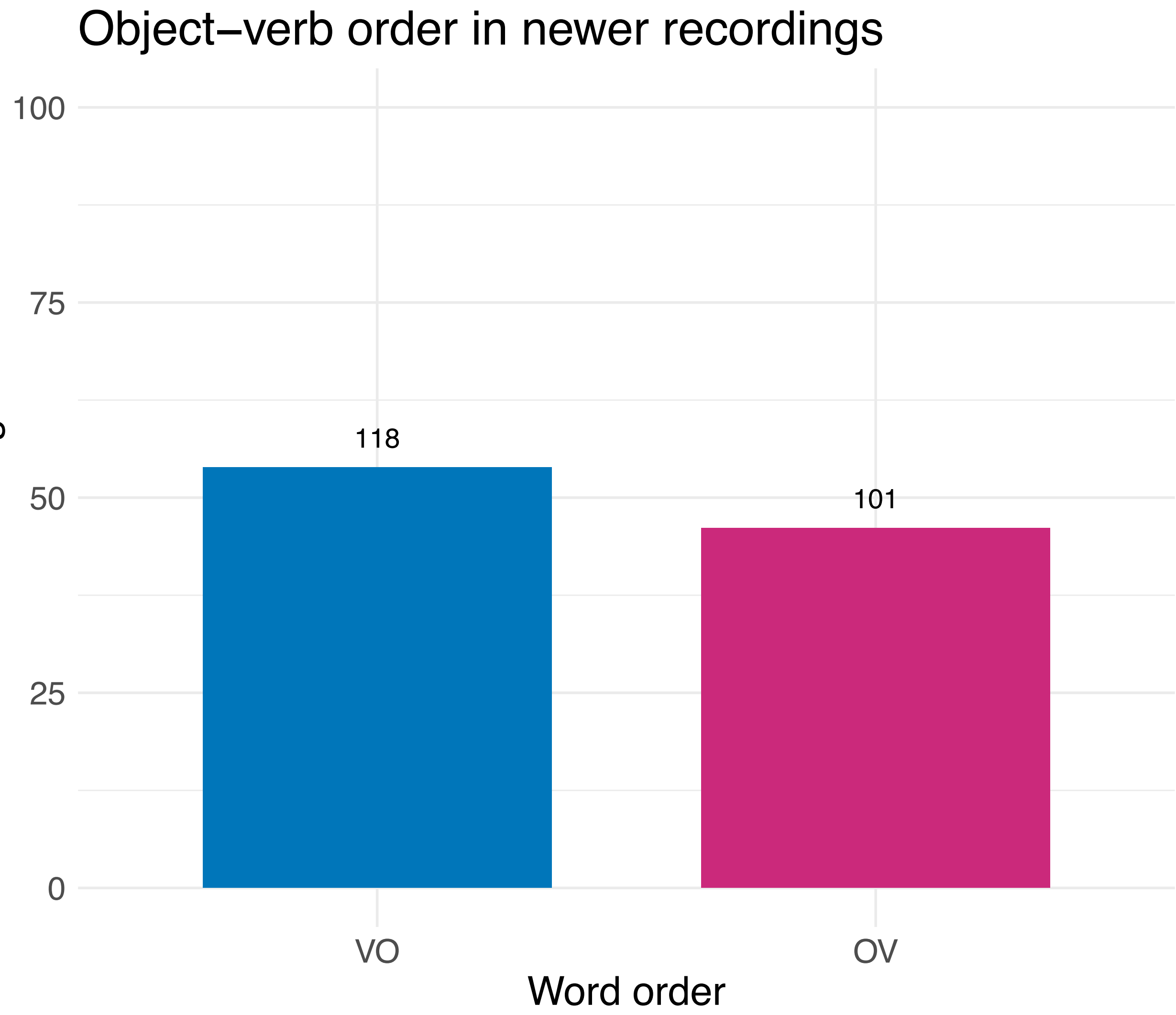
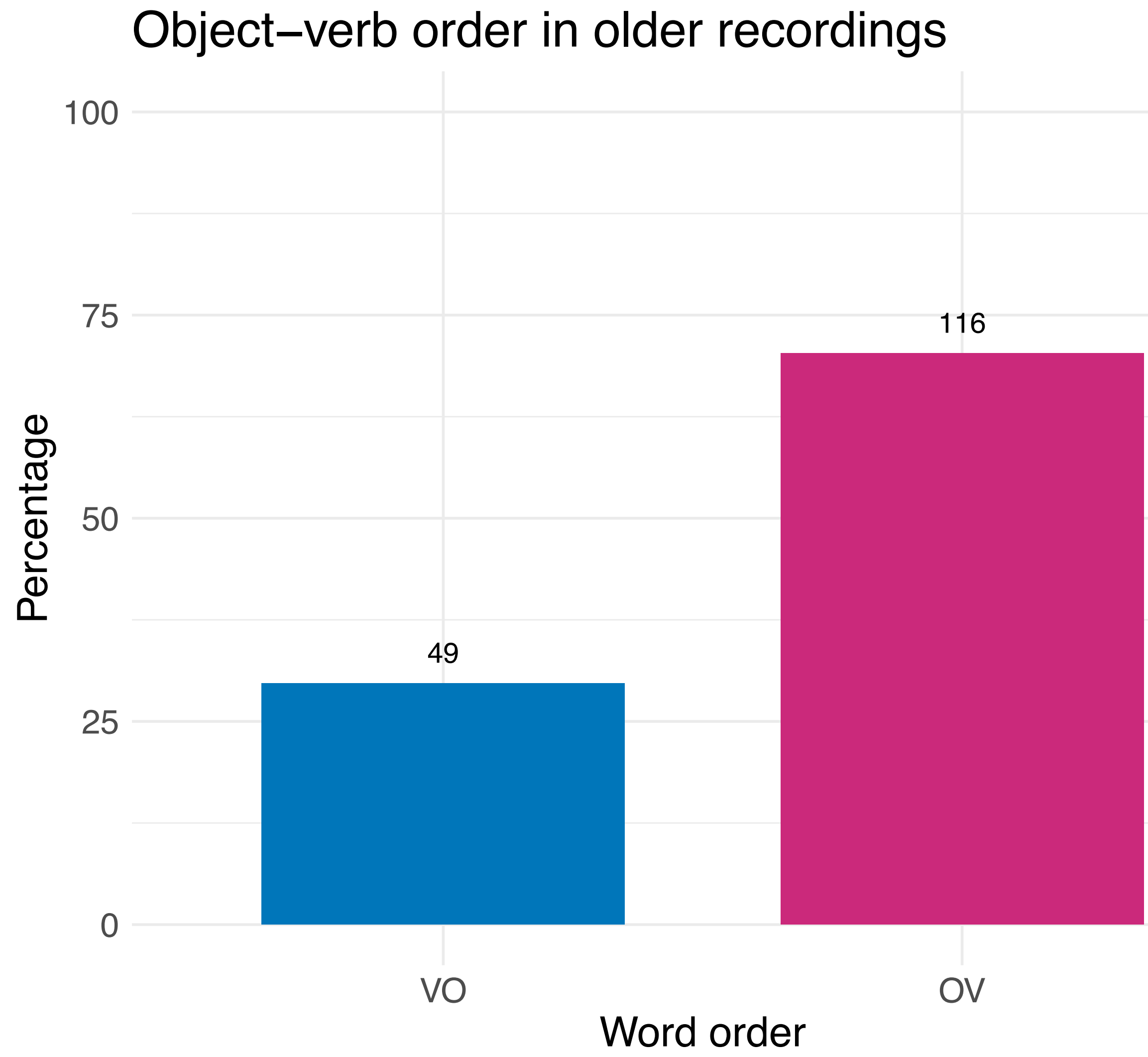


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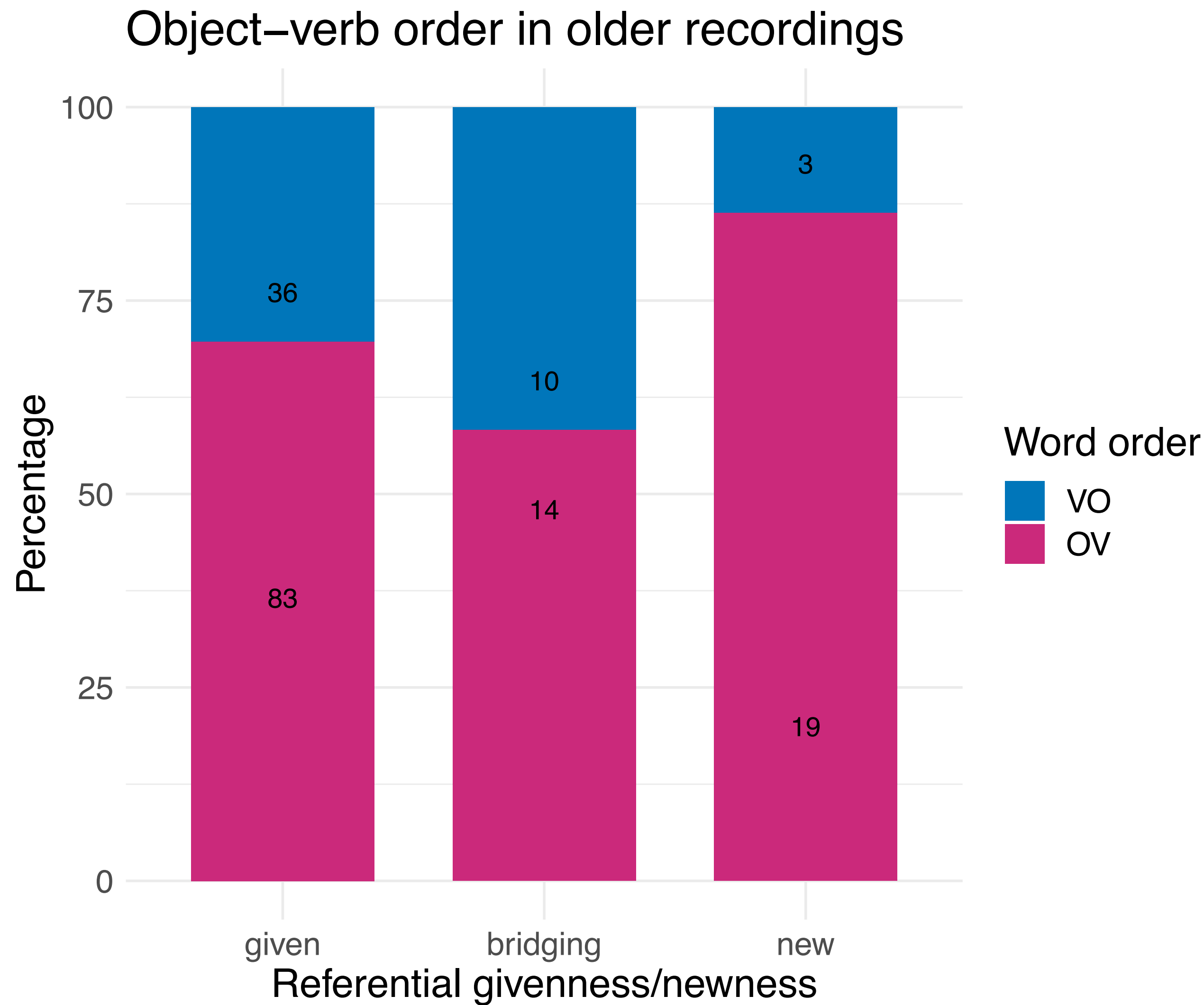




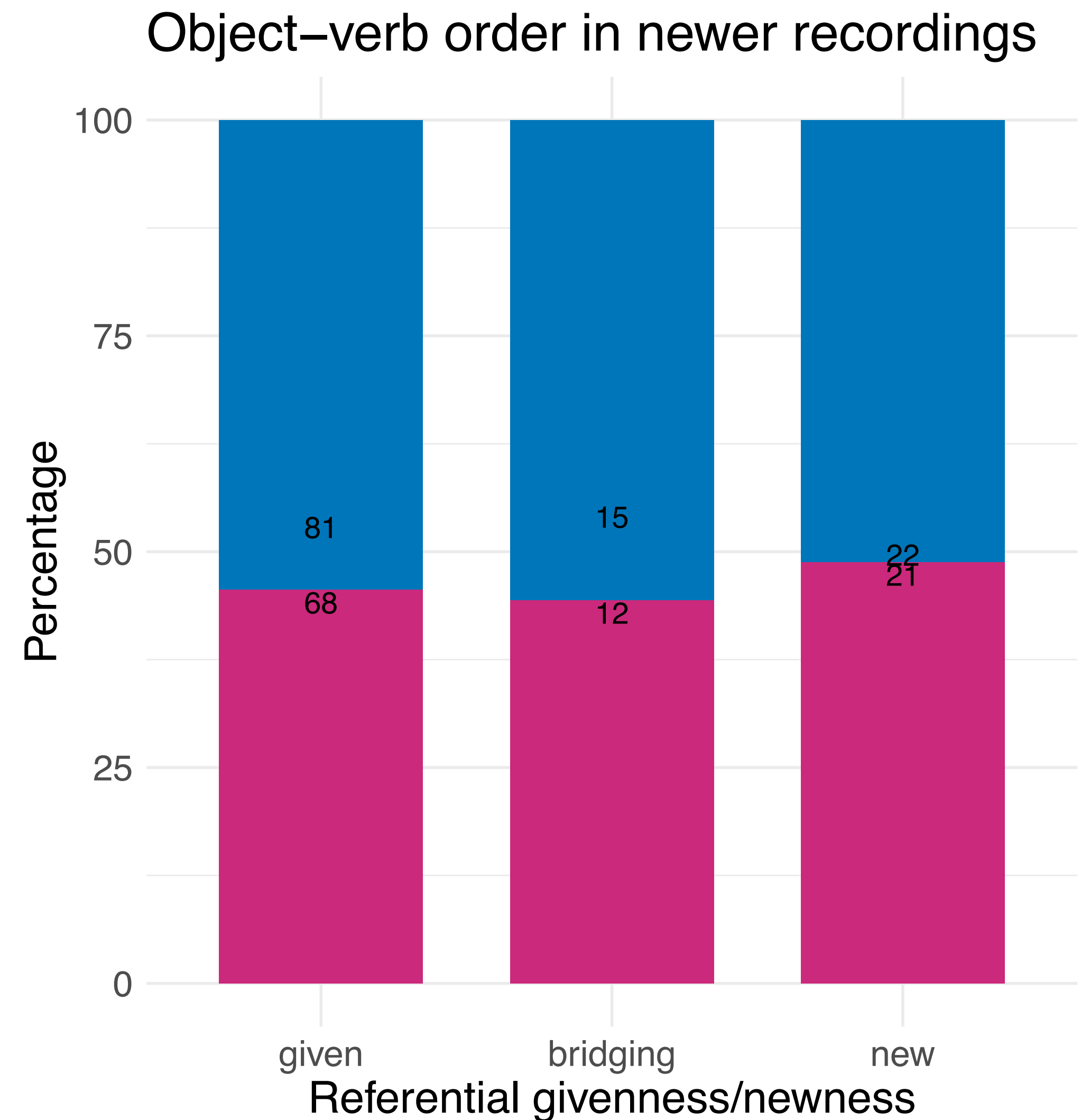
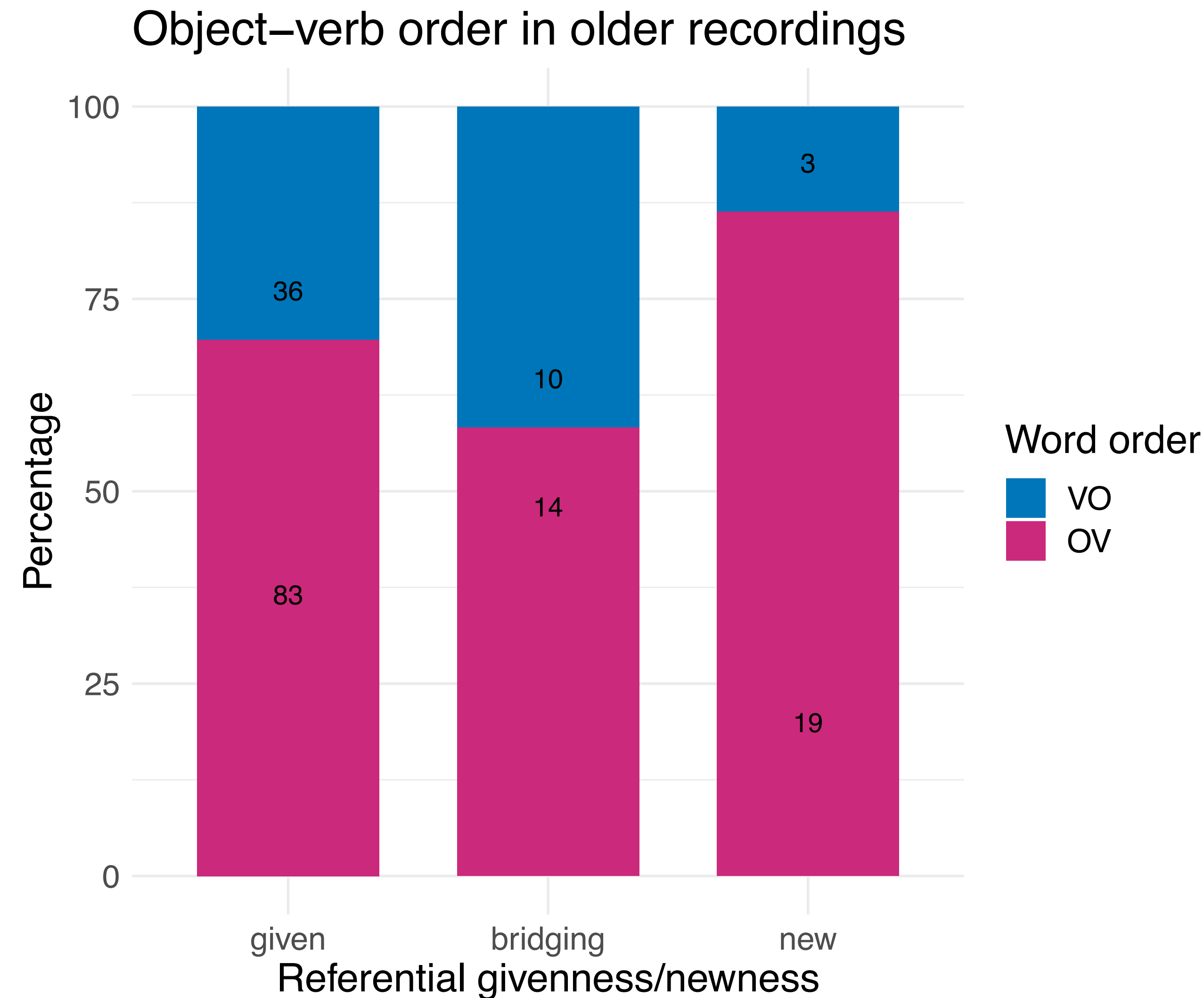
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Referential givenness/newness only affects word order in older recordings:



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> Increase in VO order, but paradoxically increase in flexibility
2. What variables influence word order and have they changed?
> Referential givenness affects word order with variation across datasets

Conclusion

- Know your data and genre!
- I need to include and control for more factors in the future

Outlook

- More **word order types** (incl. auxiliary, non-finite clauses, etc.)

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- More variables (idea tracking, contrastiveness, animacy, “topicality”, antecedent distance, transitivity, loanwords, case marking, etc.)
- Statistical modeling between variables and word order types
- Qualitative analysis of parts of the corpus
- Qualitative analysis of **prosody**

Thank you!



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